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EXAMINER

KAO, CHIH CHENG G

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2882

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/798,203	Applicant(s) RAINER, HAUPL	
	Examiner Chih-Cheng Glen Kao	Art Unit 2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-9 and 11-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-9,11-13 and 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 1, 2, 4-9, 11-13, and 15-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 1 and 11, the claims call for rotation over an angle of greater than 180 degrees. Although the specification as originally filed describes a rotation of 90 degrees (figs. 1 and 2; and paragraph 8), it does not disclose rotation over an angle of greater than 180 degrees. Consequently there is doubt as to whether Applicant had possession of the claimed invention at the time of filing. Therefore, the claims have been rejected for failing to comply with the written description requirement. Claims 2, 4-9, 12, 13, and 15-17 are rejected for the above reason by virtue of their dependency.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2882

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4, 5, 7, 11-13, and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khutoryansky et al. (US 5636259) in view of Mekker et al. (US 4727564).

3. Regarding claim 1, Khutoryansky et al. discloses a support system for an x-ray source, comprising a ceiling holding (fig. 3, via #394) including a mounting device (fig. 3, #154), and a support arm fixedly secured about a horizontal axis (fig. 3, #278 and 284) to the mounting device, such that the x-ray source (fig. 3, #112) is secured, rotatably about a substantially horizontal axis (fig. 3, #188), to the support arm, wherein a lower edge of the mounting device (fig. 3, lower edge of #276) and a lower edge of the support arm (fig. 3, lower edge of #278) are disposed vertically below the horizontal axis of rotation (fig. 3, #188) of the x-ray source, and wherein the horizontal axis of rotation (fig. 3, #188) of the x-ray source is positioned on the support arm such that a portion of an envelope (figs. 8-13, exterior of #112) of the x-ray source remains below the lower edge of the support arm (fig. 3, lower edge of #278) and the lower edge of the mounting device (fig. 3, lower edge of #276) if the envelope is rotated over an angle greater than 180 degrees (figs. 10 and 11, in particular) about the horizontal axis of rotation (figs. 8-13, #188).

However, Khutoryansky et al. fails to disclose rotation over an angle greater than 180 degrees.

Mekker et al. teaches rotation over an angle greater than 180 degrees (fig. 4, #50).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to modify the system of Khutoryansky et al. with the rotation of Mekker et al., since one would have been motivated to make such a modification for greater movement and flexibility (abstract) as implied from Mekker et al.

Furthermore, since the Examiner finds that the prior art (i.e., Khutoryansky et al.) contained a “base” system upon which the claimed invention can be seen as an “improvement”, and since the Examiner finds that the prior art (i.e., Mekker et al.) contained a “comparable” system that has been improved in the same way as the claimed invention, the Examiner thus finds that one of ordinary skill in the art could have applied the known “improvement” technique (of Mekker et al.) in the same way to the “base” system (of Khutoryansky et al.) and the results would have been predictable to one of ordinary skill in the art. Therefore, such a claimed combination would have been obvious.

4. Regarding claim 11, Khutoryansky et al. discloses a support system for an x-ray source, comprising a supporting platform (fig. 3, via #394) including a mounting device (fig. 3, #154), and a support arm fixedly secured about a horizontal axis (fig. 3, #278 and 284) to the mounting device, such that the x-ray source (fig. 3, #112) is secured, rotatably about a substantially horizontal axis (fig. 3, #188), to the support arm, wherein a lower edge of the mounting device (fig. 3, lower edge of #276) and a lower edge of the support arm (fig. 3, lower edge of #278) are disposed vertically below the horizontal axis of rotation (fig. 3, #188) of the x-ray source, wherein the x-ray source has an envelope (figs. 8-13, exterior of #112), and wherein the horizontal axis of rotation (fig. 3, #188) of the x-ray source is positioned on the support arm such

that a portion of the envelope (figs. 8-13, exterior of #112) of the x-ray source remains below the lower edge of the support arm (fig. 3, lower edge of #278) and the lower edge of the mounting device (fig. 3, lower edge of #276) if the envelope is rotated plus or minus 180 degrees (figs. 10 and 11, in particular) about the horizontal axis of rotation (figs. 8-13, #188).

However, Khutoryansky et al. fails to disclose rotation over an angle greater than 180 degrees.

Mekker et al. teaches rotation over an angle greater than 180 degrees (fig. 4, #50).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to modify the system of Khutoryansky et al. with the rotation of Mekker et al., since one would have been motivated to make such a modification for greater movement and flexibility (abstract) as implied from Mekker et al.

Furthermore, since the Examiner finds that the prior art (i.e., Khutoryansky et al.) contained a “base” system upon which the claimed invention can be seen as an “improvement”, and since the Examiner finds that the prior art (i.e., Mekker et al.) contained a “comparable” system that has been improved in the same way as the claimed invention, the Examiner thus finds that one of ordinary skill in the art could have applied the known “improvement” technique (of Mekker et al.) in the same way to the “base” system (of Khutoryansky et al.) and the results would have been predictable to one of ordinary skill in the art. Therefore, such a claimed combination would have been obvious.

5. Regarding claim 2, Khutoryansky et al. further discloses wherein the support arm comprises a substantially right angled bend (fig. 3, #278 and 284).

6. Regarding claim 4, Khutoryansky et al. further discloses wherein the support arm (fig. 3, #278 and 284) is fixedly secured about a vertical axis to the mounting device (fig. 3, #154).

7. Regarding claims 5 and 13, Khutoryansky et al. further discloses wherein the mounting device is substantially vertically adjustable (fig. 3, via #156).

8. Regarding claim 7, Khutoryansky et al. further discloses wherein a line extension of the horizontal axis of rotation (fig. 3, #188) of the x-ray source extends through the mounting device (fig. 3, #154).

9. Regarding claim 12, Khutoryansky et al. further discloses wherein the supporting platform is moveable (fig. 1, along #140 and 142).

10. Regarding claims 15-17, Mekker et al. further teaches wherein the angle is less than 270 degrees, less than 360 degrees, or greater than 270 degrees (fig. 4, #50).

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Khutoryansky et al. and Mekker et al. as applied to claim 1 above, and further in view of Horbaschek (US 2002/0118793).

Khutoryansky et al. as modified above suggests a system as recited above.

However, Khutoryansky et al. fails to disclose wherein a ceiling holder is rotatable about a substantially vertical axis.

Horbaschek teaches wherein a ceiling holder is rotatable about a substantially vertical axis (fig. 4 and paragraph 25, lines 6-9).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to further modify the system of Khutoryansky et al. as modified above with the rotatable ceiling holder of Horbaschek, since one would have been motivated to make such a modification for more maneuverability (figs. 1-5) as implied from Horbaschek.

Allowable Subject Matter

12. Claim 14 is allowed. The following is a statement of reasons for the indication of allowable subject matter.

The prior art fails to disclose or fairly suggest a support system for an x-ray source, including wherein the horizontal axis of rotation of the x-ray source is positioned on the support arm such that a lower edge of the x-ray source is disposed below the lower edge of the support arm and the lower edge of the mounting device, independently of an x-ray source angle of rotation about the horizontal axis, wherein a line extension of the horizontal axis of rotation of the x-ray source is laterally displaced with respect to the vertical axis of symmetry of the mounting device, and is parallel to lines extending along each of two side edges of the x-ray source; and wherein one of the lines of one of the two side edges of the x-ray source extends on one vertical side of the mounting device, and the other line of the other side edge extends through the mounting device, in combination with all of the other limitations in the claim.

Response to Arguments

13. Applicant's arguments with respect to claims 15-17 have been considered but are moot in view of the new ground(s) of rejection. Applicant's arguments filed July 14, 2008, have been fully considered but they are not persuasive.

14. Regarding the claim rejections under 35 USC 112, 1st paragraph, Applicant argues that it would be inconsistent with the prosecution history to now reject the claims under this statute. The Examiner does not find this argument persuasive for withdrawing the rejection. Regardless of whether the prosecution history is consistent or not, the written description requirement ultimately refers to the specification as originally filed and what was reasonably conveyed to one skilled in the relevant art with regards to what the inventor(s) had possession of, at the time the application was filed. Arguing that the prosecution history would be inconsistent does not alter the facts of the case with regards to what was originally filed.

Applicant further argues that *ipsis verbis* disclosure is not necessary to satisfy the written description requirement of section 112. *In re Edwards*, 568 F.2d 1349, 1351-52, 196 USPQ 465,467 (CCPA 1978). Although, that may be true in some cases, the Examiner believes that this is not the case for this application, since the application does not reasonably convey to persons skilled in the art that the inventor had possession of the subject matter (i.e., with the rotation angle greater than 180 degrees) in question. On the contrary, there is doubt as to whether Applicant had possession of the claimed invention at the time of filing.

Each case must be decided on its own facts. *In re Edwards*, 568 F.2d 1349, 1351-52, 196 USPQ 465,467 (CCPA 1978). With that in mind, further analysis of the specification as originally filed is needed in order to determine what the facts of the case are. As pointed out by Applicant, in page 4, paragraph [003], the specification as originally filed does recite that "regardless of the x-ray source angle of rotation with respect to a rotation about the horizontal axis, the lower edge of the x-ray source is always located below the lower edge of the support arm...." This is a fact. Is it a fact that, at the time of filing the application, Applicant had possession of the system with an angle of rotation greater than 180 degrees? No. Is there doubt as to whether Applicant had possession of such a system? Yes.

For the sake of argument, let us assume that Applicant only had possession of a system with an angle of rotation only equal to or less than 180 degrees, and Applicant did not think of having a system with an angle of rotation greater than 180 degrees at the time of filing the application. A statement as recited in page 4, paragraph [003], would apply to such a system because regardless of the x-ray source angle of rotation (i.e., the capable angle of rotation only equal to or less than 180 degrees) with respect to a rotation (i.e., the capable rotation only equal to or less than 180 degrees) about the horizontal axis, the lower edge of the x-ray source is always located below the lower edge of the support arm. Based on this analysis, the statement on page 4, paragraph [003], would also apply to a system having a rotation only equal to or less than 180 degrees. So, there is a possibility that Applicant only had possession of a system with an angle of rotation only equal to or less than 180 degrees. Consequently, there is also doubt as to whether Applicant had a system with a rotation angle greater than 180 degrees. Since it is not a fact that Applicant had possession of a system with a rotation angle greater than 180 degrees at

the time of filing the application, the claims as currently presented are rejected for failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

15. Regarding the claim rejections under 35 USC 103(a), Applicant argues that there is no implication that "greater movement and flexibility" applies to rotation of the x-ray assembly, thereby concluding that the motivation for such a modification must be seen to arise from the Applicant's own claims. The Examiner disagrees. As recited in column 8, lines 62-64 of Mekker et al., "The x-ray tube head is mounted for a variety of rotational motion...." Having a variety of rotational motion implies "greater movement and flexibility" compared to an x-ray tube head that does not have such a range as seen in Khutoryansky et al. Therefore, the motivation to incorporate the teaching of Mekker et al. into Khutoryansky et al. is found in the reference themselves, not from Applicant's own claims.

Furthermore, in response to Applicant's argument that substituting the manually rotatable joint of Mekker et al. into an automatically controlled system of Khutoryansky et al. would be inoperative, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, Khutoryansky et

al. teaches a rotatable x-ray tube head. Mekker et al. teaches an x-ray tube head rotatable over an angle greater than 180 degrees. Therefore, the combination of references suggests a rotatable x-ray tube head (Khutoryansky et al.) rotatable over an angle greater than 180 degrees (Mekker et al.).

In conclusion, Applicant's arguments are not persuasive, and the claims are still rejected.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (571)272-2492. The examiner can normally be reached on M - F (9 am to 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chih-Cheng Glen Kao/
Primary Examiner, Art Unit 2882